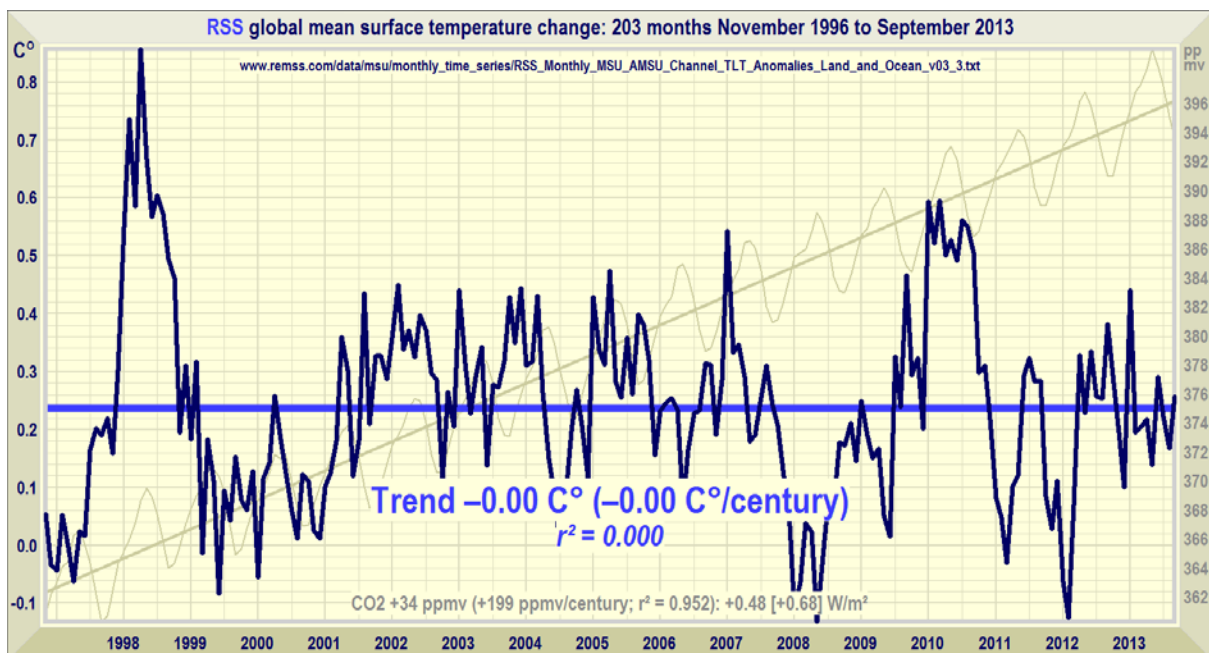


Written evidence submitted by Christopher Walter Viscount Monckton of Brenchley (IPCC0005)

Summary

- 1 All five IPCC *Assessment Reports* have greatly exaggerated the predicted global warming trend compared with observed reality.
- 2 In the *Fifth Assessment Report*, the exaggeration compared with outturn since January 2005 is already approaching a quarter of a Celsius degree.
- 3 Few of the models on which the IPCC unsoundly founds its case predicted this:



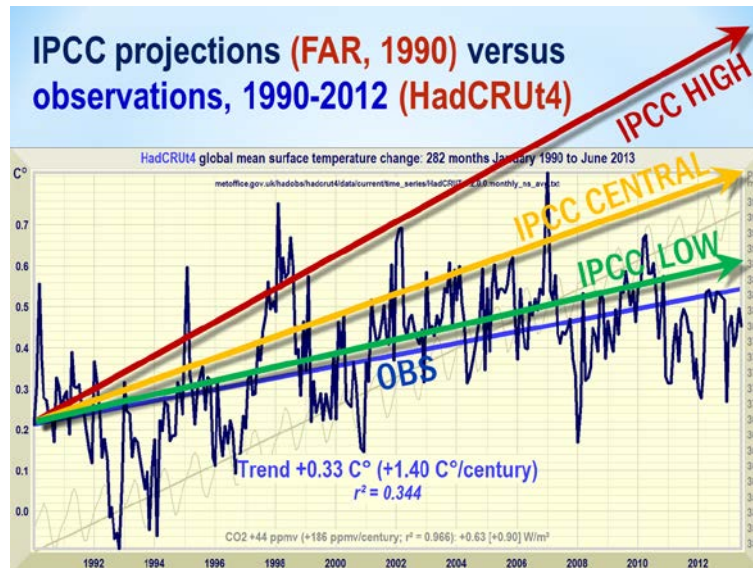
- 4 The models have exaggerated global warming in the oceans, at the Earth's surface and in the mid-troposphere, where the "hot-spot" that the models predict will occur if and only if Man is influencing global temperature is entirely absent.
- 5 The IPCC used fraudulent artifices so as falsely to abolish the mediaeval warm period, which was at least as warm as the present and, in most places, warmer; and so as falsely to state, twice, that the rate of global warming was accelerating and that we were to blame.
- 6 Mitigation of global warming today would be 10-100 times costlier than focused adaptation to its predicted net-adverse consequences the day after tomorrow, even if warming were to occur at the predicted rate and cost, which it will not.
- 7 There is not enough CO₂ in the air to "acidify" the oceans, which are in any event maintained at a homoeostatic acid-base balance through buffering by the rock basins in which they lie.
- 8 The IPCC has a financial vested interest in prophesying doom. It is not peer-reviewed in the recognized sense. It suppresses contributions from dissenting scientists. It has perpetrated multiple serious scientific frauds. It should be ignored, defunded and abolished.

9 Lord Monckton's expertise

- 10 Lord Monckton is an Expert Reviewer for the IPCC's *Fifth Assessment Report* (2013). His published papers in the academic journals include *Climate Sensitivity Reconsidered*, in *Physics and Society* for July 2008; *Let Cool Heads Prevail*, published in the *Journal of the Chartered Insurance Institute of London* for April/May 2009; *Global Brightening and Climate Sensitivity*, published in the *Annual Proceedings of the World Federation of Scientists' Seminars on Planetary Emergencies*, 2010, reprinted in the book *Empirical climate science*, edited by Dr. Don Easterbrook in 2011; *Is CO2 Mitigation Cost-Effective?* (WFS *Annual Proceedings*, 2012); and *Climate Consensus and 'Misinformation': a Rejoinder to 'Agnotology, Scientific Consensus, and the Teaching and Learning of Climate Change'*, published in *Education and Science* (2013). Lord Monckton is Chief Policy Advisor to the Science and Public Policy Institute, which has published more than 100 papers by him on climate science and climate economics. He has have given lectures, seminars and invited papers at faculty as well as undergraduate level on climate sensitivity and climate economics at Charles University School of Economics, Prague; Texas A&M University; the University of Rochester, New York; Hartford University, Connecticut; South-Eastern Louisiana University; Union College, Schenectady; the University of California at Los Angeles and at Sacramento; Brigham Young University; Liberty University, Virginia; the Catholic University of Colombia, Bogota; Cambridge University; Oxford University; Trinity College, Dublin; the National University of Ireland; St. Andrew's University; and Keele University. Lord Monckton gave an invited presentation on climate economics at the Los Alamos Climate Conference in Santa Fe in 2011. He gave the Hancock Lecture at the University of Western Australia in 2011 and the Nerenberg Lecture on Mathematics, Canada's premier annual mathematics lecture, at the University of Western Ontario in 2012. He founded, co-chaired and addressed the panel on climate economics of the World Federation of Scientists in 2012. He has testified four times on climate change before the United States Congress. He has chaired or addressed hundreds of public and private meetings worldwide on climate change, including meetings in both Houses of the UK Parliament and of the US Congress. His largest live audience was 100,000 people. His address to the Minnesota Free Market Institute on the then-proposed Copenhagen climate treaty in October 2009 received almost 3 million hits in a week on YouTube, and is thought to have attained the fastest YouTube platinum for any political speech. He has advised several governments on climate change, and have addressed the Kentucky, Colorado and California State Legislatures, and the European and Danish Parliaments. He has addressed international conferences on climate in the UK, Germany, Denmark, Belgium, the Czech Republic, Australia, China, India, Colombia and several other nations. In 2009 the South-Eastern Legal Foundation awarded Congressman John Linder and Lord Monckton jointly the Meese-Noble Award for Freedom for their work on climate change. In 2013 the Army Intelligence School of Colombia awarded Lord Monckton its Intelligence Medal for his work on climate change.
- 11 The questions posed by the Energy and Climate Change Committee will be repeated *seriatim* in **bold face** and answered in Roman face.

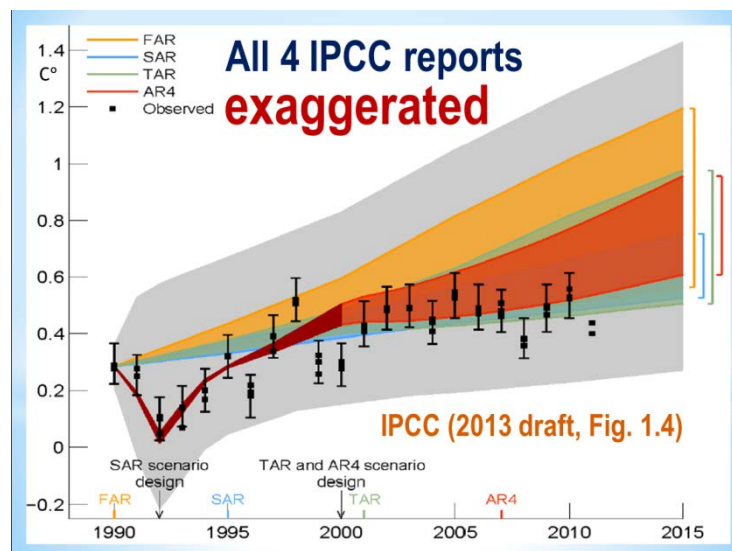
12 **How robust are the conclusions in the AR5 Physical Science Basis report? Have the IPCC adequately addressed criticisms of previous reports? How much scope is there to question the report's conclusions?**

13 In the IPCC's 1990 *First Assessment Report*, the climate models' entire range of predictions about the global temperature increase to date was an exaggeration:



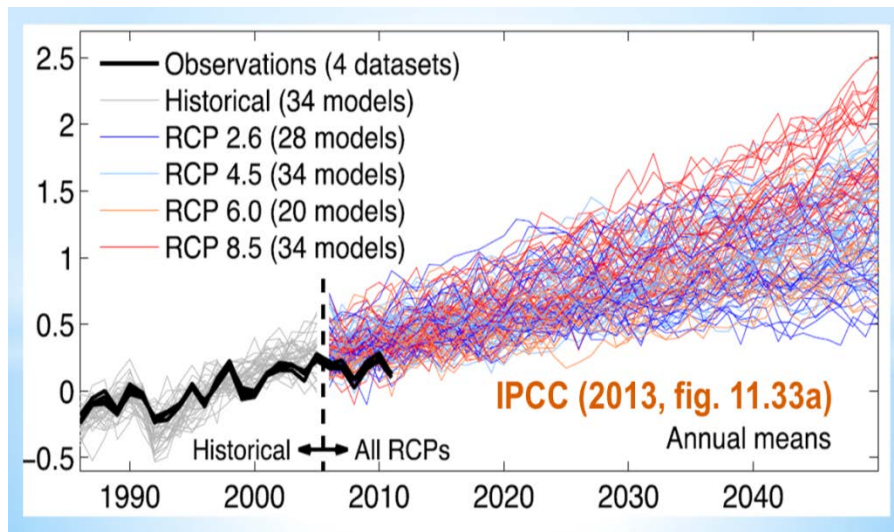
Global mean surface temperature anomalies since 1990 (dark blue: HadCRUt4) and trend (light blue) against the range of projected trends (green, yellow, red) in the *First Assessment Report* (1990).

5. Projections in all four earlier *Assessment Reports* were excessive compared with outturn:



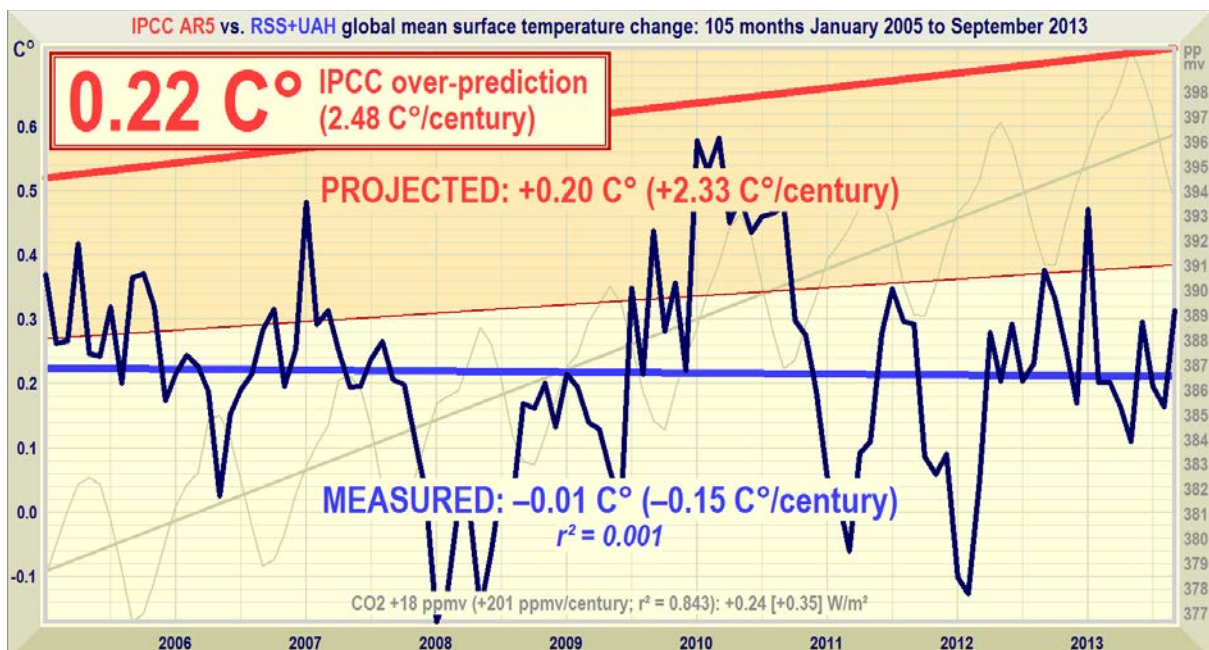
Global warming projections in the *First* (orange), *Second* (blue), *Third* (green) and *Fourth* (brown) *Assessment Reports*, compared with the observed outturn (black).

The projections in the *Fifth Assessment Report* were backcast to 2005:



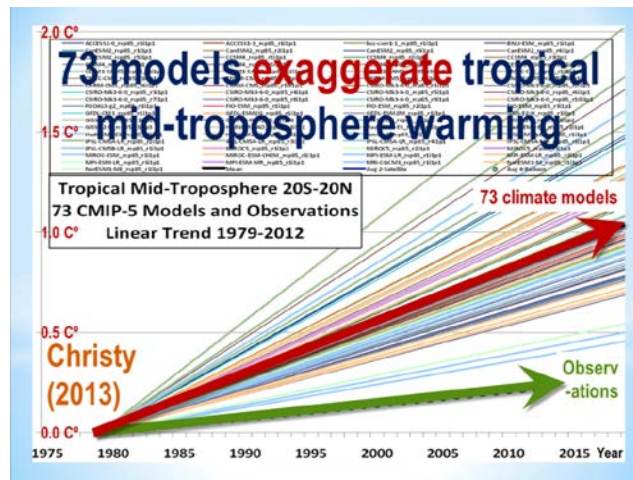
Latest IPCC projections from 34 models (colour) backcast to 2005 (vertical dotted line), visibly overshooting observation (black) even where backcast.

The extent of the IPCC's latest exaggeration of the global warming trend since 2005 is more precisely displayed and quantified below:

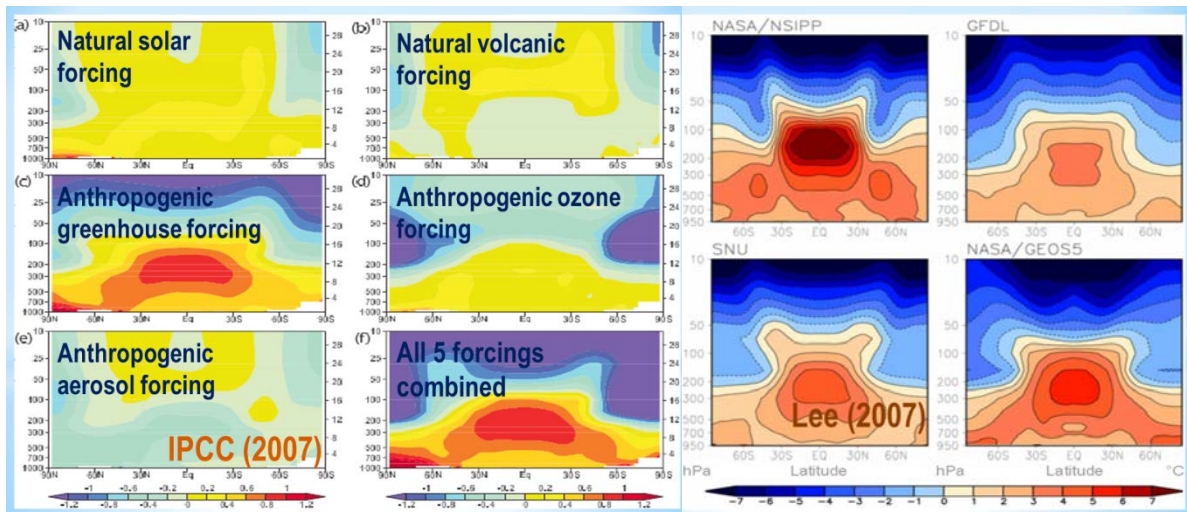


Global warming projections from 34 models since January 2005 in the IPCC's *Fifth Assessment Report* are shown as an orange region. The IPCC's central projection, the thick red line, is that the world should have warmed by 0.20 C° over the period (equivalent to 2.33 C°/century). The 18 μatm (201 μatm/century) rise in the trend on the gray dogtooth CO₂ concentration curve, plus other greenhouse-gas forcings, should have caused 0.1 C° warming, with the remaining 0.1 C° from previous CO₂ increases. Yet the mean of the RSS and UAH satellite measurements, in dark blue over the bright blue trend-line, shows global cooling of 0.01 C° (-0.15 C°/century). The models have thus over-predicted warming by 0.22 C° (2.48 C°/century).

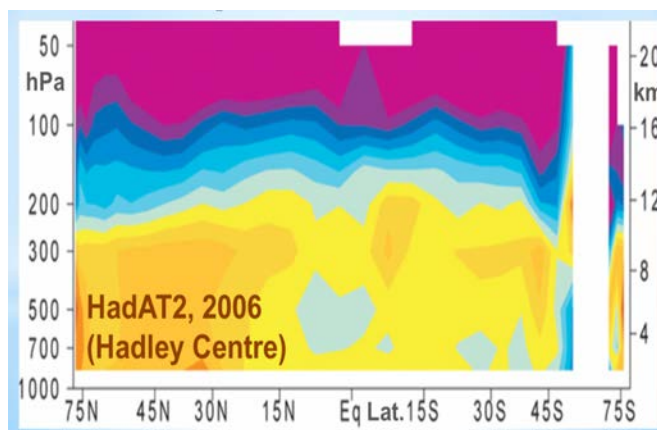
14 Warming of the crucial tropical mid-troposphere is exaggerated in 73 climate models:



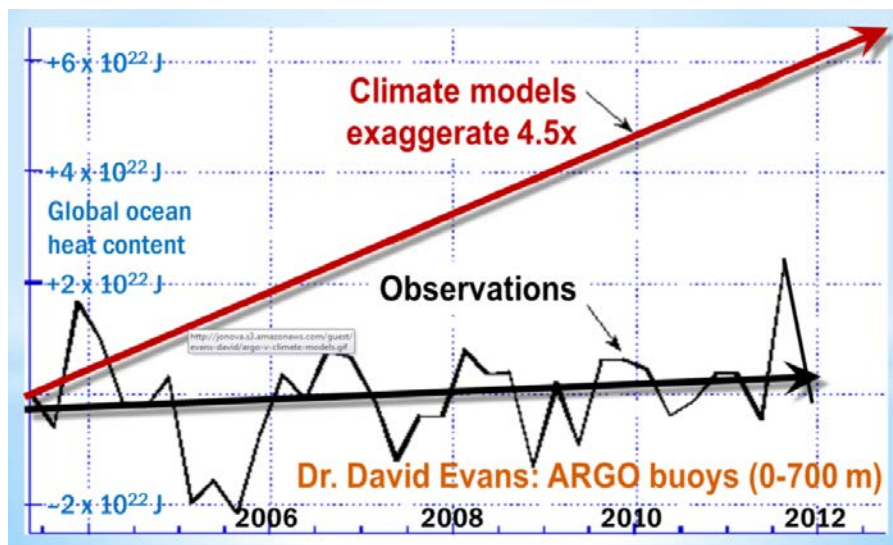
Trends in mid-troposphere warming since 1980 in 73 climate models (mean trend shown by a red arrow), compared with observed outturn (trend shown by a green arrow).



The models predict 2-3 times the surface warming rate in the tropical mid-troposphere if and only if anthropogenic warming is present (above). However, in almost every dataset, the model-predicted mid-troposphere “hot spot”, as it is known, is entirely absent in the observed tropical mid-troposphere (below).

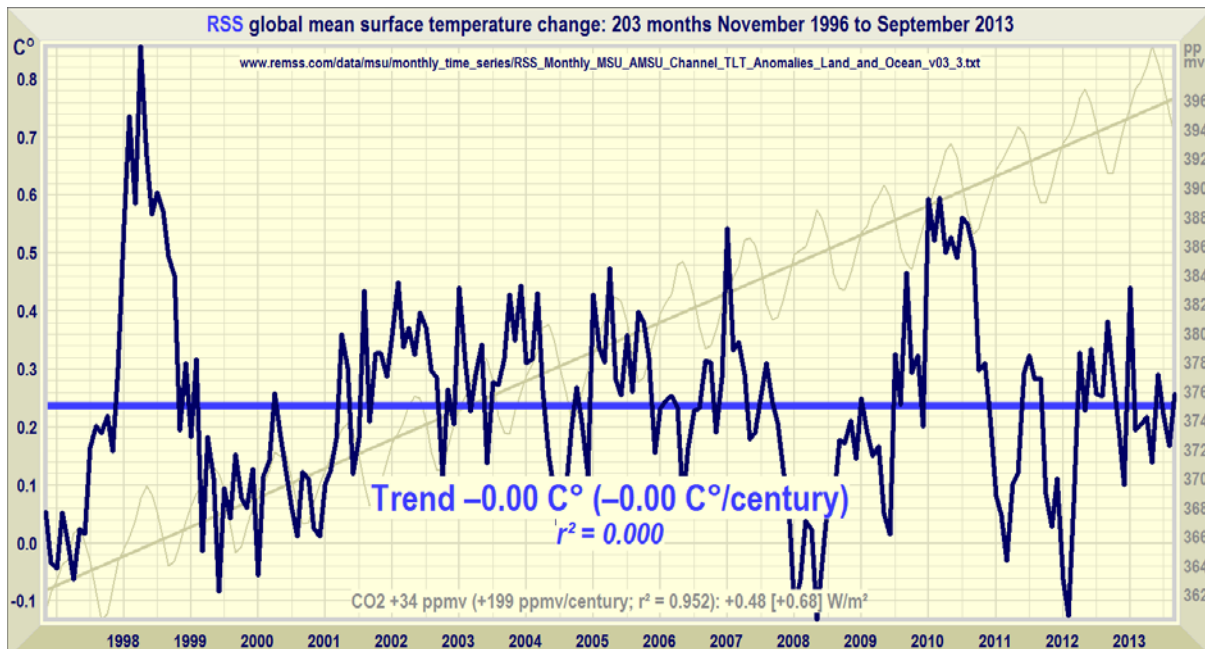


15 The models also greatly exaggerate ocean warming compared with observation:



Climate models' projected trend in ocean heat content since 2003 (red arrow), in units of 10^{22} Joules, compared with observed outturn and trend measured by 3500 automated ARGO bathythermograph buoys (black).

16 Global mean surface temperature has not risen at all for very nearly 17 years. Very few of the models predicted that. Indeed, NOAA's *State of the Climate* report in 2008 had stated that a standstill in global warming of 15 years or more would indicate a statistically significant discrepancy between model prediction and real-world observation:



RSS monthly global mean lower-troposphere temperature anomalies (dark blue) and trend (light blue), November 1996 to September 2013. The RSS satellite dataset, which shows no global warming at all for 16 years 11 months, and no statistically-significant warming for almost a quarter of a century, is probably the most accurate available, since it correctly represents the magnitude of the natural Great El Niño event in 1998, which, like its two predecessors over the past 300 years, caused widespread coral bleaching.

17 The evidence presented above suggests that the principal conclusions of the *Fifth Assessment Report* are visibly unreliable and not robust. The IPCC's approach relies chiefly upon modelling which has proven to have exaggerated warming considerably compared with observations in the oceans, at the surface and in the mid-troposphere.

18 My expert review of the second-order draft of the *Fifth Assessment Report* began thus:

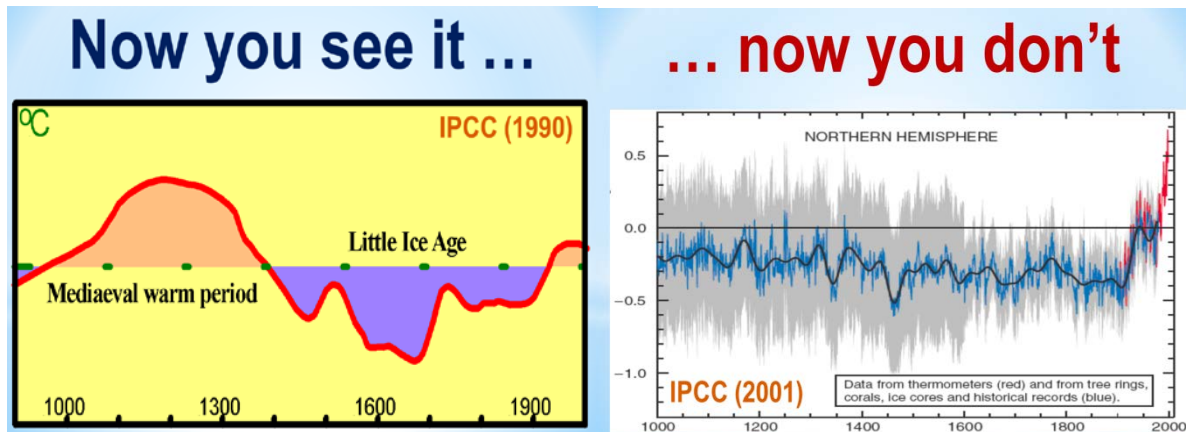
“To restore some link between IPCC reports and observed reality, the report must address – but does not at present address – the now-pressing question why the key prediction of warming in earlier IPCC reports have proven to be significant exaggerations. The IPCC's credibility has already been damaged by its premature adoption and subsequent hasty abandonment of the now-discredited “hockey-stick” graph as its logo; by its rewriting its *Second Assessment Report* after submission of the scientists' final draft, to state the opposite of their finding that no discernible human influence on climate is detectable; by its declaration that all Himalayan ice would be gone in 25 years; and by its use of a dishonest statistical technique in 2007 falsely to suggest that the rate of global warming is accelerating. But the central damage to its credibility arises from the absence of anything like the warming it had predicted. *Example:* In 1990 the IPCC's central estimate was that warming would occur at 0.3 K/decade and that by now some 0.6 K warming would have occurred. Since then observations show warming has occurred at 0.14 K/decade and 0.3 K warming has occurred. There has been no global warming for 16 years [now very nearly 17 years].”

19 The IPCC responded, in the pre-final draft sent to governments, by inserting a statement to the effect that models had not generally represented the standstill in global warming over the past decade and a half. However, at the insistence of the political representatives of Germany and Hungary, the statement was removed on the ground that it would indicate that the IPCC had not previously been correct in its predictions (which it had not).

20 This episode is a reminder that the IPCC is, as its founder Maurice Strong had always intended, a political and not a scientific body. It is pursuing a partisan, self-serving and in some respects scientifically disreputable course. It has a direct, financial vested interest in prophesying doom. For if it were to admit what is now becoming apparent, that CO₂ will have a modest, slow and harmless warming effect, and that even if warming were to occur at the predicted rate and cost it would be orders of magnitude more expensive to mitigate today than to adapt the day after tomorrow, governments would – rightly – see no further need to fund it.

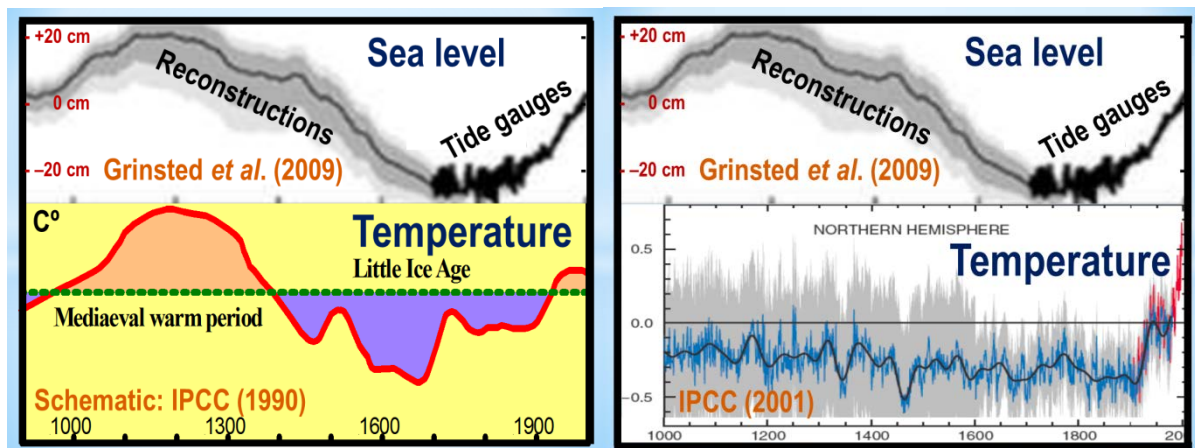
21 Furthermore, the IPCC has failed adequately to address criticisms of previous reports. For instance, it continues to try to maintain, in the teeth of overwhelming proxy evidence, that there was no mediaeval warm period, or that, if there was, it was not warmer than the present. The overwhelming evidence from proxy measurements (as opposed to mere modelling) from all parts of the world, in papers by more than 1200 scientists from more than 450 institutions in more than 40 countries over the past 25 years is that the Middle Ages were at least as warm as the present almost everywhere.

22 To test whether the overwhelming proxy measurement evidence or the models were correct, I compared a reconstruction of sea levels over the past 1000 years (from Grinsted *et al.*, 2009) with the IPCC's 1990 and 2001 reconstructions of millennial temperature change:



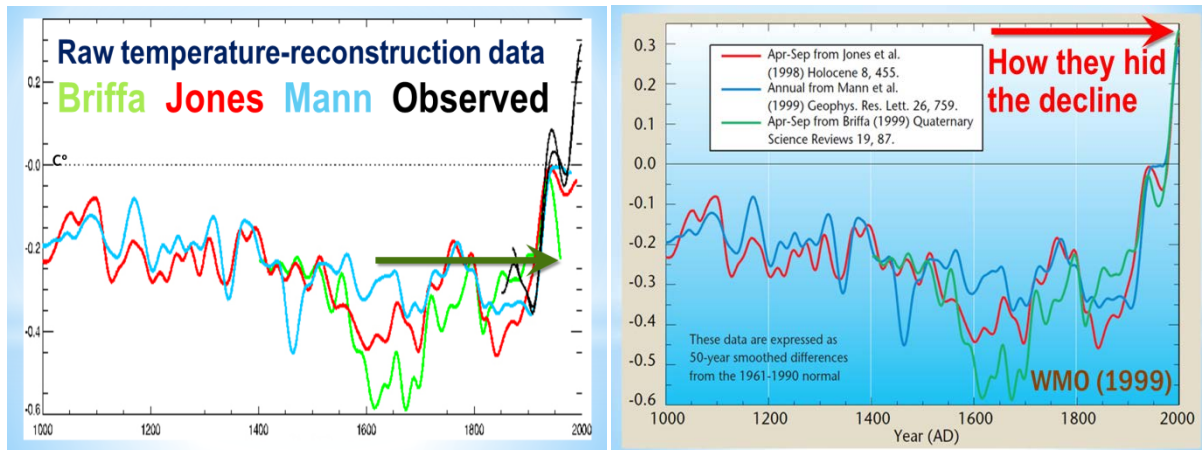
The mediaeval warm period and little ice age were clearly shown in a schematic (left panel) in the IPCC's *First Assessment Report* in 1990. Yet in 1995 Dr. David Deming, who had recently published a paper reconstructing 1000 years of global temperatures by thousands of borehole measurements worldwide and showing clearly the existence of the mediaeval warm period, received an email from Dr. Jonathan Overpeck, an IPCC author, saying, "We have to abolish the mediaeval warm period". Sure enough, by the IPCC's *Third Assessment Report* in 2001 both the mediaeval warm period and the little ice age had been abolished and, by ingeniously confining the new graph (right panel) to the northern hemisphere, the global warming of the 20th century was exaggerated by 50%.

23 When the Earth's surface warms, temperature in the mixed layer of the ocean (i.e. the first 2000 feet) also increases. Because water occupies more space as it warms, sea level rises with warming by what is known as thermosteric expansion. Therefore, if there had indeed been no mediaeval warm period, sea level over the past 1000 years would have changed little, but a sudden, sharp increase would have been evident in the 20th century. However, the sea-level reconstruction from Grinsted *et al.* does not match the IPCC's 2001 graph purporting to abolish the mediaeval warm period, but it does match its 1990 graph showing the mediaeval warm period and the little ice age:



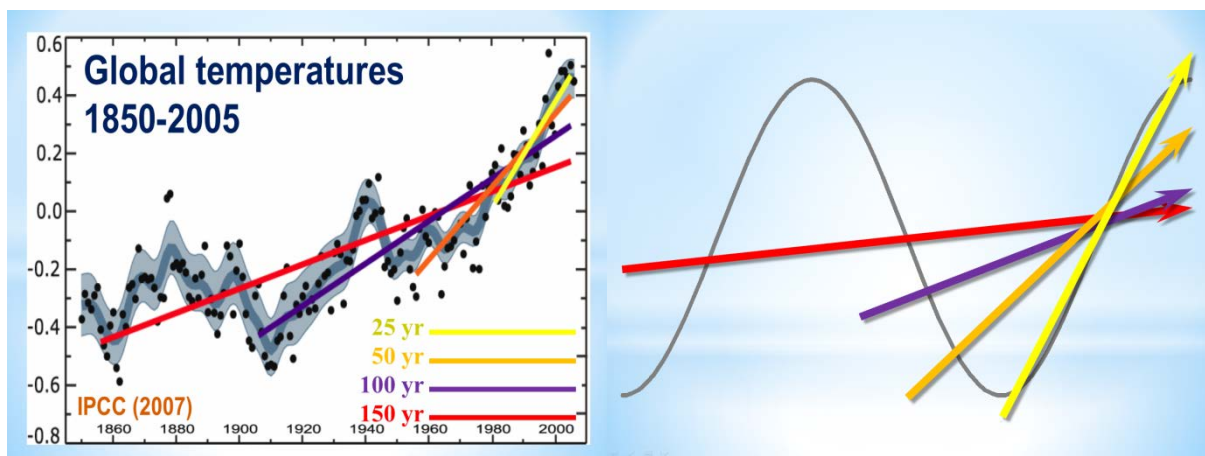
Sea level rise matches the mediaeval warm period (left), but not its absence (right).

24 Next, I enquired how it could be that the fabricators of the IPCC's 2001 graph had so heavily weighted the result by using the widths of annual tree-rings from bristlecone pines to reconstruct pre-thermometer temperatures. For the IPCC had previously recommended firmly against bristlecones, whose annual tree-rings widen not only in warmer weather but also when it was wetter and when there was more CO₂ in the air. I discovered that in 1999 three tree-ring series had been plotted against temperature change measured by thermometers:



25 The raw model-generated data in three millennial tree-ring reconstructions, Briffa (green), Jones (red) and Mann (blue), are compared (left panel) with the global thermometer data (black). None of the three follows the observed data upward after 1960. Briffa shows a decline (green arrow). Yet what the WMO published in 1999 (right panel) removed the thermometer data but showed all three tree-ring reconstructions following the observed data upwards. A Climategate email from Professor “Phil” Jones in 2009 says: “I’ve just completed Mike [Mann’s] *Nature* trick of adding in the real temps since 1960 ... to hide the decline” – a decline that revealed that the tree-ring data on which the graph abolishing the mediaeval warm period were based were not suitable for temperature reconstructions. The IPCC, however, continues to back this scientific fraud.

26 Another instance of fraud occurred in the IPCC's 2007 *Fourth Assessment Report*:



HadCRUT3 annual global temperature anomalies, 1850-2005 (left panel: grey); the same artifice applied to a sine-wave with a known zero trend (right panel).

The IPCC superimposed four trend-lines on the data, and twice said the steeper slope of the more recent trend-lines indicated that global warming was accelerating. Yet the same technique can be used to demonstrate that a sine-wave has an accelerating uptrend, when its true trend is by definition zero. As an expert reviewer, I told the IPCC that its statements that global warming is accelerating were not justified by the technique it had used, but it has refused to correct its fraudulent conclusion. Unfortunately, all four reports are full of ingenious misrepresentations of this sort. The IPCC sullenly refuses to correct them.

27 To what extent does AR5 reflect the range of views among climate scientists?

28 When the initial scoping meeting for AR5 was to be held in Hawaii, I applied to participate and was told I could not attend because I was known not to agree with the IPCC's conclusions. The scientific clique that runs the IPCC also tried to exclude Professor Paul Reiter, the world's foremost expert on the epidemiology of malaria, who had been nominated by the U.S. The IPCC pretended it had not received his nomination papers, but he had sent the papers to four separate high officials, with proof of delivery. I sent the IPCC a list of more than 400 scientific papers demonstrating its error about the mediaeval warm period, but hardly any are referenced in the *Fifth Assessment Report*. Only one viewpoint is allowed. The IPCC can rely upon acquiescent governments to let it continue to present a narrow, partisan, prejudiced viewpoint with little scientific merit.

29 Can any of the areas of the science now be considered settled as a result of AR5's publication, if so which? What areas need further effort to reduce the levels of uncertainty?

30 Adding greenhouse gases to an atmosphere like ours may be expected to cause some warming, all other things being equal. However, it is by no means clear that any measurable warming will result from our altering the atmospheric composition by the predicted 1 part in 3000 this century, for the temperature feedbacks whose presence the IPCC relies upon to triple the small direct warming from a doubling of CO₂ concentration may be net-negative, cancelling rather than amplifying the direct warming from CO₂ (Lindzen and Choi, 2009, 2011; Spencer & Braswell, 2010, 2011). Furthermore, the equation the IPCC uses so as mutually to amplify the net-positive feedbacks whose quantification relies upon just a single paper has no physical meaning in the real climate, though it has a meaning in electronic circuitry, for which it was originally derived.

31 How effective is AR5 and the summary for policymakers in conveying what is meant by uncertainty in scientific terms? Would a focus on risk rather than uncertainty be useful?

32 The IPCC said it was 66% confident in 1996 that Man caused more than half the warming since 1950. It was 90% confident in 2007 and 95% confident in 2013. However, one cannot apply statistical confidence intervals of this kind unless a statistical process is used. The process used in 1990, however, was a show of hands among government representatives. The IPCC's confidence intervals are, accordingly, meaningless political statements with no scientific validity whatsoever.

33 Does the AR5 address the reliability of climate models?

34 As noted earlier, I and others invited the IPCC to address the unreliability of the models; it tried to do so; but the politicians overruled the scientists.

35 Has AR5 sufficiently explained the reasons behind the widely reported hiatus in the global surface temperature record?

36 As noted earlier, the IPCC failed to address the hiatus: so much so that, at the Doha climate conference, I had to reveal to the world that the hiatus existed. I was greeted with howls of derision by fellow-delegates, few of whom knew of it because the IPCC and its supporters had, until then, concealed it. Now it is indeed widely known, and it has persisted for a further year. The IPCC has no satisfactory explanation for it.

37 Do the AR5 Physical Science Basis report's conclusions strengthen or weaken the economic case for action to prevent dangerous climate change?

38 There is no economic case for climate action. A paper of mine published by the World Federation of Scientists in August 2013 establishes that it is 10-100 times costlier to attempt to mitigate global warming today than to allow it to occur at the officially-predicted rate and cost and to adapt to its predicted net-adverse consequences the day after tomorrow. Even if dangerous climate change were likely, which it is not, focused adaptation would be the correct response. Nothing should be spent today.

39 What implications do the IPCC's conclusions in the AR5 Physical Science Basis report have for policy making both nationally and internationally?

40 The only policy implication is that nothing should be spent on mitigating non-existent global warming. Instead, resilience against climate change in either direction should be enhanced on a proportionate and affordable scale. Based on the time-integral of declining solar activity, global cooling is more likely than warming in the next five to ten years.

41 Is the IPCC process an effective mechanism for assessing scientific knowledge? Or has it focussed on providing a justification for political commitment?

42 IPCC reports are not peer-reviewed in any accepted sense of that term. Its clique of lead authors can and does override reviewers, as they did when told the Himalayan glaciers would not after all disappear in 25 years. The best place for science is the peer-reviewed scientific journals. The IPCC should be ignored, defunded and abolished.

43 To what extent did political intervention influence the final conclusions of the AR5 Physical Science Basis summary?

44 As noted earlier, the German and Hungarian political representatives ordered the scientists to remove a statement whose insertion I had requested, to the effect that the models had generally failed to represent the 17-year standstill in global warming. With respect, politicians are not the best people to do science. For this reason among many others, it is time to do away with the IPCC.

45 Is the rate at which the UK Government intends to cut CO2 emissions appropriate in light of the findings of the IPCC AR5 Physical Science Basis report?

46 There is no need to cut CO2 emissions, which are and will remain not only harmless but net-beneficial, by common consent, until at least 1.3 K further global warming has occurred, and that could take 100-400 years.

47 What relevance do the IPCC's conclusions have in respect of the review of the fourth Carbon Budget?

48 The IPCC itself has said (AR4, WG3) that there is no economic case for intervention to mitigate global warming. Indeed, the near-unanimous opinion in the economic peer-reviewed literature, to which I have contributed, is that there is no case for mitigation at all. Besides, there is no need for a "carbon budget". Carbon dioxide is a naturally-occurring trace gas essential to all life on Earth. It is plant-food, and it is also essential to the functioning of calcifying organisms such as corals, which first thrived when its atmospheric concentration was 15-20 times today's. CO2 fertilization increases crop yields and reduces crops' water dependence. Tripling the present atmospheric concentration would probably exhaust realistically-extractable fossil fuels worldwide. Trees and plants would thrive. Temperatures would hardly change.

49 Since the oceans already contain 70 times as much CO2 as the air, it would be impossible appreciably to acidify them even if all the CO2 in the air found its way into the sea. Besides, the oceans are buffered by the rock basins in which they move, and the buffering is homeostatic, maintaining the present pronouncedly alkaline acid-base balance. So even the fall-back position that the profiteers of doom have adopted when faced with the failure of their global-warming predictions – ocean "acidification" – has no rational scientific basis.

50 The climate scare is over.

November 2013